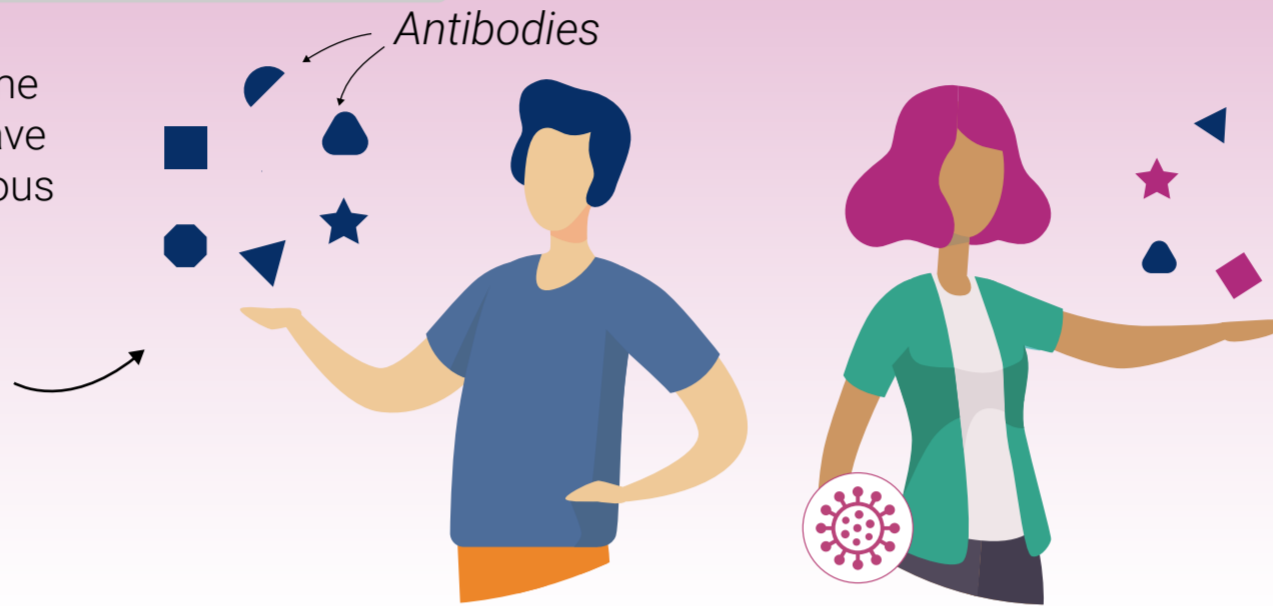


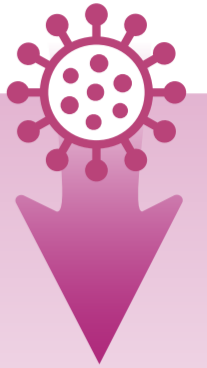
How is our immunity to COVID-19 shaped by infection and vaccination?

A person's immune system produces specific antibodies in response to any infection.

Before COVID-19, some people may already have **antibodies** from previous infections with other coronaviruses like the common cold.



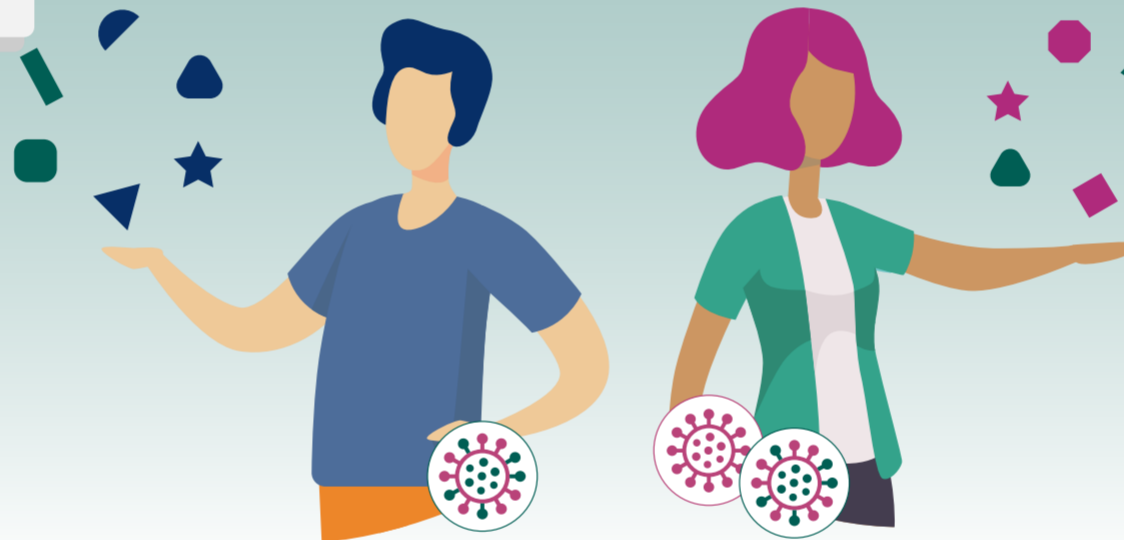
FIRST WAVE of COVID-19



Those who were infected with the original COVID-19 virus produced unique **antibodies** against that variant.

A person's immune system will produce different antibodies in response to a new variant of the COVID-19 virus.

These will be different in someone who has **not previously been infected**...



ALPHA WAVE of COVID-19



...compared to someone who was infected during the first wave.



COVID-19 vaccines trigger an immune response to the virus.

Vaccination programme begins

When someone receives a COVID-19 vaccine dose, their immune response is influenced by any previous infections with the virus.



Different types of COVID-19 vaccine may be given



SUBSEQUENT WAVES of COVID-19



DELTA WAVE



OMICRON WAVE

A person's immunity to COVID-19 is shaped by their previous infections, and the number and type of COVID-19 vaccine doses. This is called 'immune imprinting' and means that, individually and globally, people have different immune repertoires to fight the virus.

This will be vitally important when planning future COVID-19 vaccine campaigns, and when developing new vaccines against the virus.